



## RESPONSE TO COMMENT ON DAWSON-HUGHES ET AL.

# Intratrtrial Exposure to Vitamin D and New-Onset Diabetes Among Adults With Prediabetes: A Secondary Analysis From the Vitamin D and Type 2 Diabetes (D2d) Study. Diabetes Care 2020;43:2916–2922

*Diabetes Care* 2021;44:e106 | <https://doi.org/10.2337/dc21-0006>

We thank Dr. Davidson for his comment (1) on our article (2). We agree that weight loss is critically important in reducing risk of diabetes; weight loss can also result in increased 25-hydroxyvitamin D [25(OH)D] levels. We did not adjust for weight change because weight remained fairly stable during the trial. Nonetheless, in response to Dr. Davidson's request, we have examined the impact of adjustment for change in weight (final – baseline weight) in the fully adjusted models shown in our article. In the group as a whole, the hazard ratios (HRs) changed from 0.57 (95% CI 0.41–0.79) to 0.55 (0.40–0.76) in the 25(OH)D category of 100–124 nmol/L and from 0.35 (0.24–0.50) to 0.34 (0.24–0.50) in the highest 25(OH)D category of  $\geq 125$  nmol/L. These minimal changes were expected because weight did not change much during the trial (mean change among the five 25(OH)D categories ranged from –0.5 kg to 0.7 kg). We also examined the impact of weight change in each group

separately. In participants assigned to placebo, the additional adjustment for weight change altered the HR from 0.67 (0.40–1.12) to 0.69 (0.41–1.17) in the 100–124 nmol/L category and from 0.47 (0.15–1.52) to 0.58 (0.58–1.86) in the  $\geq 125$  nmol/L category. In participants assigned to vitamin D, the additional adjustment for weight change reduced the HRs from 0.48 (0.29–0.80) to 0.41 (0.24–0.69) in the 100–124 nmol/L category and from 0.29 (0.17–0.50) to 0.25 (0.15–0.43) in the  $\geq 125$  nmol/L category. These analyses confirm that weight loss did not account for the reduced incidence of diabetes observed in participants assigned to treatment with 4,000 IU per day of vitamin D who maintained high levels of 25(OH)D during the trial.

**Funding.** The authors' work was supported by a grant from the National Institutes of

Bess Dawson-Hughes,<sup>1,2</sup>  
Jason Nelson,<sup>2</sup> and  
Anastassios G. Pittas<sup>2</sup>

Health National Institute of Diabetes and Digestive and Kidney Diseases (U01DK098245). B.D.-H. is supported by U01DK098245 and U.S. Department of Agriculture, under agreement No. 58-1950-0-014. A.G.P. is supported in part by generous donations to the Tupper Research Fund at Tufts Medical Center.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the National Institutes of Health or the U.S. Department of Agriculture.

**Duality of Interest.** No potential conflicts of interest relevant to this article were reported.

## References

- Davidson MB. Comment on Dawson-Hughes et al. Intratrtrial exposure to vitamin D and new-onset diabetes among adults with prediabetes: a secondary analysis from the Vitamin D and Type 2 Diabetes (D2d) study. *Diabetes Care* 2020;43:2916–2922 (Letter). *Diabetes Care* 2021;44:e105. DOI: 10.2337/dc20-3130
- Dawson-Hughes B, Staten MA, Knowler WC, et al.; D2d Research Group. Intratrtrial exposure to vitamin D and new-onset diabetes among adults with prediabetes: a secondary analysis from the Vitamin D and Type 2 Diabetes (D2d) study. *Diabetes Care* 2020;43:2916–2922

<sup>1</sup>Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University, Boston, MA

<sup>2</sup>Tufts Medical Center, Boston, MA

Corresponding author: Anastassios G. Pittas, apittas@tuftsmedicalcenter.org

© 2021 by the American Diabetes Association. Readers may use this article as long as the work is properly cited, the use is educational and not for profit, and the work is not altered. More information is available at <https://www.diabetesjournals.org/content/license>.